

CLAIMS

1. An optical disc recording apparatus to record unit data generated by division based on a specified reproduction unit according to a specified format on an optical disc, comprising:

unit data group formation means for forming a unit data group comprising at least one piece of unit data;

thumbnail image generation means for generating a thumbnail image for the unit data;

link information generation means for generating unit data link information to link with each unit data forming the unit data group;

data group generation means for generating a data group comprising a unit data group formed by the unit data group formation means and unit data link information generated by the link information generation means; and

closed session processing means for performing a closed session process so that other reproducing apparatuses can read an optical disc recording at least one data group,

wherein the closed session processing means generates a menu image including the thumbnail image based on the unit data, generates menu image link information for linking with the menu image, and records the menu image and the menu image link information on the optical disc.

2. The optical disc recording apparatus according to claim 1,

wherein the format is a DVD-video format;

the unit data group formation means uses a chapter (CHP) as unit data and forms VTSTT_VOBS as a unit data group comprising at least one piece of unit data;

the link information generation means generates unit data link information included in VTSM_PGCI for linking with each chapter forming the VTSTT_VOBS; and

the data group generation means generates VTS as a data group comprising VTSTT_VOBS formed by the unit data group formation means and unit data link information generated by the link information generation means.

3. The optical disc recording apparatus according to claim 1,

wherein the closed session processing means generates a menu image including at least one thumbnail image.

4. The optical disc recording apparatus according to claim 1 comprising storage means for storing a thumbnail image generated by the thumbnail image generation means,

wherein the closed session processing means, when generating a menu image, uses a thumbnail image stored in the storage means.

5. The optical disc recording apparatus according to claim 4, wherein the storage means is flash memory.

6. The optical disc recording apparatus according to claim 1, the closed

session processing means performs a closed session process so that other reproducing apparatuses can read an optical disc such as DVD-R or DVD-RW recording at least one data group.

7. An optical disc recording method to record unit data generated by division based on a specified reproduction unit according to a specified format on an optical disc, comprising the steps of:

forming a unit data group comprising at least one piece of the unit data;

generating a thumbnail image for unit data each time the unit data is recorded on the optical disc;

generating unit data link information to link with each unit data forming the unit data group;

generating a data group comprising the unit data group and the unit data link information;

performing a closed session process so that other reproducing apparatuses can read an optical disc recording at least one data group,

wherein the closed session processing step generates a menu image including the thumbnail image based on the unit data, generates menu image link information for linking with the menu image, and records the menu image and the menu image link information on the optical disc.